

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 4-7, 9-11 and 13. These sheets, which include Figs. 4-7, 9-11 and 13, replace the original sheets including Figs. 4-7, 9-11 and 13.

Attachment: Replacement Sheets

REMARKS

Claims 1, 3-27, 37, 38, 40-50 and 53-55 are pending in this application. Claims 28-36, 39, 51 and 52 were withdrawn by the Examiner based on an election made by the Applicants in response to a restriction requirement and are canceled without prejudice to the filing of a divisional application. Claim 2 is canceled. Claims 1, 12, 15, 37, 38 and 40 are currently amended. Claims 53-55 are new. No new matter has been introduced.

Figures 4-7, 9-11 and 13 have been amended to add labels to functional blocks and to use symbols representing functional blocks consistent with the description in the specification. The specification has been amended to correct an error in a reference number.

The Examiner rejected claims 37 and 38 under 35 U.S.C. Section 101 as directed to non-statutory subject matter. While Applicants respectfully traverse the Examiner's rejections, Applicants have amended claims 37 and 38 to recite a "computer-readable memory medium." Accordingly, Applicants submit that claims 37 and 38 are directed to statutory subject matter.

The Examiner rejected claims 1, 8-12, 15, 21-25, 40-42, 44-46, 49 and 50 under 35 U.S.C. Section 102(b) as anticipated by U.S. Patent No. 6,243,779 issued to Devanney, et al. The Examiner rejected claims 3-7, 16-20, 37, 38 and 43 under 35 U.S.C. Section 103(a) as obvious over Devanney, without citing another reference. The Examiner rejected claim 2 under 35 U.S.C. Section 103(a) as obvious over Devanney in view of U.S. Patent No. 6,539,051 issued to Grivna. The Examiner rejected claims 13, 14, 26 and 27 under 35 U.S.C. Section 103(a) as obvious over Devanney in view of U.S. Publication No. 2002/0133777 by Lin, et al. Applicants respectfully traverse the Examiner's rejections and specifically reserve the right to establish that one or more of the cited references is not prior art.

Claim 1, as amended, recites, "identify in the signal to be transmitted and in the context of said signal transmitted on the bus at the preceding instant among said given instants, a first set of bits that are not changed, a second set of bits that are changed, and a marker bit that separates the bits of the first set from the bits of the second set in the signal to be transmitted on the bus at the instant of said given instants; and a decision whether to transmit said signal to be

transmitted on the bus in non-encoded format and in encoded format is based on a position of the marker bit.” The Examiner does not rely on Devanney (or Lin) as teaching, suggesting or motivating a marker bit. The Examiner points Grivna as teaching marker bits in general and suggests it would be obvious to combine Grivna and Devanney. See Office Action, page 10, paragraph 7. However, Devanney teaches away from using a marker bit because Devanney always compares all the bits of a current word with all of the bits of a previous word (as well as always encoding or not encoding an entire word). Thus, there is no purpose for a marker bit in Devanney. Moreover, the marker bits of Grivna are always separated from each other by a character width of serial data. Thus, combining the marker bits of Grivna with the entire word process of Devanney would not achieve the claimed invention. Accordingly, independent claim 1 is not anticipated or rendered obvious by Devanney, alone or in combination with Grivna and Lin. Claims 3-14 depend from claim 1 and are allowable at least by virtue of their dependencies.

Independent claim 15, as amended, recites, “said comparison module comprises a logic network that is able to compare bit by bit, in orderly sequence, said signal to be transmitted on the bus at an instant of said given instants and said signal transmitted on the bus for the preceding instant among said given instants, so as to identify a first set of bits that are not changed, a second set of bits at least some of which are changed, and a boundary between the first set of bits and the second set of bits; and said transmission-driving module is configured for driving the transmission of said signals on the bus in non-encoded format and in encoded format based on the identified boundary. Devanney, alone or in combination with Grivna and Lin, does not teach, suggest or motivate a transmission driving module configured to drive the transmission of signals based on a boundary between first set of bits that are changed and a second set of bits that are unchanged. Claims 16-27 and 55 depend from claim 15, and are allowable at least by virtue of their dependencies.

Independent claim 37, as amended, recites, “[a] computer-readable memory medium containing software code portions for causing a processor to perform a method comprising comparing a signal to be transmitted on a bus for an instant of given instants with a signal transmitted on the bus for a preceding instant among said given instants ... so as to identify in the signal to be transmitted, and in the context of the signal transmitted on the bus for

the preceding instant among said given instants, a first set of bits that are not changed and a second set of bits that are changed.” The Examiner points to a previous word of Devanney as the set of bits that is not changed and to the current word of Devanney as the set of bits that is changed. However, the previous word of Devanney cannot simultaneously be a set of bits of a signal to be transmitted and a signal transmitted in a previous instant. Accordingly, claim 37 is not anticipated, or rendered obvious, by Devanney, alone or in combination with Grivna and Lin.

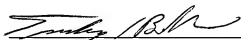
Independent claim 38, as amended, recites, “comparing the signals comprises comparing bit by bit, in orderly sequence, said signal to be transmitted on the bus at an instant of said given instants and said signal transmitted on the bus for the preceding instant among said given instants, so as to identify in the signal to be transmitted a first set of bits that are not changed, a second set of bits at least some of which are changed, and a boundary between the first set of bits and the second set of bits; and said transmission-driving module is configured for driving the transmission of said signals on the bus in non-encoded format and in encoded format limitedly to the bits of said second set of bits and based on the identified boundary. For the reasons discussed above with respect to claim 37, claim 38 is not anticipated or rendered obvious by Devanney, alone or in combination with Grivna and Lin.

Independent claim 40, as amended, recites, “identifying a boundary between a first set of bits in the second signal that are not changed and a second set of bits in the second signal at least some of which are changed based on the comparison to the first signal; processing the first set of bits in a first manner; processing the second set of bits in a second manner.” The Examiner identifies a present and a next data word of Devanney (see Devanney, col. 5, lines 1-5) as the recited first and second signals. Devanney either encodes or does not encode entire data words. Thus, if the next word of Devanney is viewed as the second signal, Devanney does not teach, suggest or motivate processing a first set of bits in the second signal in a first manner and processing a second set of bits in the second signal in a second manner. Accordingly, claim 40 is not anticipated or rendered obvious by Devanney, alone or in combination with Grivna and Lin. Claims 41-50, 53 and 54 depend from claim 40 and are allowable at least by virtue of their dependencies.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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TLB:jms

Enclosure:

7 Sheets of Replacement Drawings (Figures 4-7, 9-11 and 13)

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